Abstract of the Disclosure

An X-ray detector is for a CT device and includes a phosphor layer for generating electromagnetic radiation as a function of the occurrence of X-radiation, and a photodetector layer for detecting the electromagnetic radiation generated by the phosphor layer. The phosphor layer includes ceramic material and the photodetector layer includes organic material. A process is further for producing an X-ray detector, including the steps of producing a phosphor layer from a ceramic material and applying a photodetector layer made from an organic material to the phosphor layer via a spinning, printing or beam/jet process or by sticking it on as a film. It is optionally possible to provide a further process step for polishing the surface of the phosphor layer before applying the photodetector layer.